

## CLAIMS

What is claimed is:

- 5 1. A geocoding method comprising  
identifying from orthorectified imagery locations of entities associated with each side of a  
street segment;  
ordinally numbering the identified locations with respect to positions along each side of  
the street segment;  
10 determining street addresses associated with each side of the street segment; and  
associating the identified locations with the determined street addresses to produce  
geocoded street addresses for each side of the segment.
2. The method of claim 1 wherein determining street addresses comprises:  
15 consulting a Street Map database to obtain a range of possible addresses associated with  
each side of the street segment; and  
consulting a Situs Address database to obtain the street addresses.
3. The method of claim 2 wherein the range of possible addresses comprises:  
20 a range of even addresses; and  
a range of odd addresses.
4. The method of claim 1 wherein the street addresses comprise:  
a list of odd addresses on the street segment and  
25 a list of even addresses on the street segment.

5. The method of claim 1 wherein the identifying locations of entities comprises:  
selecting centroids associated with entity image features, and  
associating the centroids with the street segment.
- 5     6. The method of claim 5 wherein selecting centroids comprises extracting the entity  
image features and calculating the centroids from the extracted entity image  
features.
- 10     7. The method of claim 1 wherein associating the identified locations with the determined  
street addresses comprises matching, on each side of the street segment, the  
ordinal numbering of the identified locations with a natural order of the determined  
street addresses.
- 15     8. The method of claim 1 further comprising adding the geocoded street addresses to a  
database if there is a one-to-one matching between the identified locations and the  
determined street addresses.
- 20     9. The method of claim 1 wherein associating the identified locations with the determined  
street addresses comprises:  
consulting an entity registry database identifying multi-unit buildings in the street  
segment and  
associating multiple street addresses with identified locations corresponding to multi-unit  
buildings.
- 25     10. The method of claim 1 further comprising, if there is not a one-to-one matching  
between the identified locations and the determined street addresses, then  
redefining the street segment to include multiple adjacent segments.

11. A geocoding method comprising:
- obtaining a linearly ordered set of entity geocodes associated with a side of a street segment;
  - 5 obtaining a linearly ordered set of entity addresses associated with the side of the street segment; and
- associating the entity geocodes with the entity addresses by a linearly ordered matching, thereby geocoding the entity addresses.
- 10 12. The method of claim 11 wherein obtaining the linearly ordered set of entity geocodes comprises:
- obtaining a set of entity geocodes associated with the side of the street segment, where each entity geocode potentially represents an addressable entity, and
  - linearly ordering the received entity geocodes to produce the linearly ordered set of
  - 15 geocodes.
13. The method of claim 12 wherein obtaining the set of entity geocodes associated with the side of the street segment comprises identifying image features of an aerial or satellite image and correlating the image features with street segment data from a
- 20 street map data source.
14. The method of claim 13 wherein identifying image features of an aerial or satellite image comprises identifying street segments and potentially addressable entities.
- 25 15. The method of claim 12 wherein linearly ordering the received entity geocodes comprises calculating intersection points between the street segment and lines drawn perpendicular to said street segment to said entity geocodes.

16. The method of claim 12 wherein linearly ordering the received entity geocodes comprises:  
calculating intersection points between the street segment and lines drawn perpendicular  
5 to said street segment to said entity geocodes; and  
assigning a linear order to the intersection points based on distances along the street  
segment from an endpoint of the street segment to the intersection points.
17. The method of claim 11 wherein obtaining the linearly ordered set of entity geocodes  
10 comprises receiving street segment data for endpoints of the street segment.
18. The method of claim 11 wherein obtaining the linearly ordered set of entity addresses  
comprises receiving a list of assignable addresses associated with the street  
segment and linearly ordering the list.  
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19. The method of claim 18 wherein obtaining the linearly ordered set of entity addresses  
comprises associating the list with the street segment by receiving address range  
direction data and street segment side data.
20. The method of claim 11 wherein associating the entity geocodes with the entity  
20 addresses is performed in accordance with address range direction data and street  
segment side data.
21. The method of claim 11 wherein associating the entity geocodes with the entity  
25 addresses comprises producing for each side of the segment a one-to-one  
correspondence between the numerical order of the list of assignable addresses and  
the linear order of the set of entity geocodes.

22. The method of claim 11 wherein associating the entity geocodes with the entity addresses comprises accessing a entity registry database comprising multi-unit buildings and multi-building entities.

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23. The method of claim 11 wherein associating the entity geocodes with the entity addresses comprises redefining the street segment.

24. The method of claim 11 wherein associating the entity geocodes with the entity addresses comprises transferring at least one of the entity addresses to an adjacent street segment.

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25. The method of claim 11 wherein associating the entity geocodes with the entity addresses comprises switching the addresses between right and left sides of the segment.

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